



MENSTRUAL WASTE MANAGEMENT AND ENVIRONMENTAL ISSUES

Dr. Sangita Tiwari

**Asst. Prof. Department of Biotechnology,
A.P.S. University Rewa (M.P.)**

ABSTRACT:

Menstruation still faces many social and religious restrictions which create an obstacle for menstruators to dispose off the menstrual waste with dignity. Many of them face problem while they are in home, school, or in office due to in availability of proper disposable technology. It became even worst in rural areas where menstruators are taught to keep it private when it came to dispose the waste they often go with washing their wet clothes in water bodies leading the polluting the water where as in urban areas choking of sewages as a result of flushing the soiled material directly seeking always a need to aware about the right methods of disposing. Many women's in the country face restrictions on entering kitchen, worshipping, sexual intercourse, bathing etc.; as menstruation is considered as unclean and embarrassing. There are immense studies conducted regarding Menstrual Hygiene but the alarming rate of environmental exploitation is the need of time to aware about the problems in path. According to menstrual health alliance in India one sanitary pad could take 500 to 800 years to decompose as the plastic used here is non-biodegradable and can lead to health and environmental hazards. Considering 36% of the menstruating females use sanitary napkins where their environmental foot prints is high. It is equally important when it comes to the use of hygienic material and its right technique to dispose as well.



KEY WORDS: India, Female, Health, Menstruation, Environment.

INTRODUCTION -

According to WHO a person aged 10 to 19 years in which the body developed physically psychologically and biologically. Puberty is the major milestone in the girl's life which is historically associated with adolescence (Gilles, 2014). Onset of menses which is termed as Menarche considered an important phase of menstruations life. Menarche is beginning of menstruation, is a challenging experience which is usually associated with taboo and surrounded by silence and shrouded by myths (Pandey, 2014). Menstruation is regulated by hormones, in this process endometrium the lining of uterus gradually thickens and sheds off and causes bleeding that normally lasts for 3 to 5 days and occasionally up to 7 days. Menstrual blood contains fluid, mucus and vaginal secretions. Menstruation, though a normal physiological process can cause serious issues like pelvic infection, urinary tract infection, reproductive tract infection, increased risk for HIV and cervical cancer (Nielson, 2010).

Menstruation stops occurring after menopause which usually occurs between 45 to 55 years of age. By using tonnes of menstrual material and then disposing off it directly into the environment cause pollution, releasing toxic chemicals leaching the soil consequentially. In a nation like India which consists of 655 million women, 48% of them are not aware of the proper usage of a sanitary napkin (Gautami Bhor et al.). Solid Waste Management official from the BMC is quoted to have said "There is no clarity on whether sanitary napkins should be classified under Bio-Medical waste or dry waste, there is also no awareness regarding disposal even among those who stay in societies, whereas in slum areas it is usually thrown in Nullahs (Open Drains). The quantity of Municipal Solid Waste (MSW) generated in different countries depends upon a number of factors such as food habits, standard of living, degree of commercialization's and seasons (Sharholi, 2007). A study estimated that the annual solid waste of sanitary napkin found to be higher than any other menstrual absorbent product (Truyens et al.).

METHODOLOGY:-

The data here is collected by using secondary sources by going through the literature available on, Menstrual Health and Hygiene, Impact of menstrual waste on environment, sustainable menstruation, menstrual awareness; whereas the pivot of the study is to know the types of menstrual materials used by menstruations and its effect on environment.

OBJECTIVES OF THE STUDY:-

1. To know the types of absorbents used during menstruation
2. To find out the impact of menstrual waste on environment

TYPES OF ABSORBENTS USED DURING MENSTRUATION:-

Choice of absorbents depends on economic status, sanitation facilities and the area whether it is rural or urban. In rural areas reusable clothes is preferred whereas in urban areas preference goes to commercial sanitary pads.

REVIEW OF LITERATURE:-

Rajanbir Kaur et al, 2018 reviewed a number of studies under the title : Menstrual Hygiene, Management and Waste disposal : Practices and Challenges faces by Girls / Women of Developing countries, with their aims to summarize the concern and possible methods of menstrual waste management in low – income countries, the study aimed at understanding the menstrual practices , product design, demands and disposal strategies. After reviewing a number of concern studies it was found out with following : Age at menarche 12 -13 years of age as average in attaining menarche. Facing restrictions while having menses, on cooking, entering pooja room etc., using menstrual products here shows the dependency on various factors like the place where one is living, financial status, inhabiting what type of culture and so on. Most importantly the study focus on substitute for green: ecofriendly menstrual products. Under the heading Waste disposal it is shown on the one hand where menstruations are disposing the soiled products depending on the place, like when they are in public places they flush it in toilets or wrap and throw in toilets whereas at they dispose it in different way if they are in school or at home.

Despite the under usage of proper sanitary products in India, menstrual waste is increasing day by day owing to the ever increasing population. An average woman throws away around 150 kg of non-biodegradable waste every year (Sahoo 2016)

Gautami Bhor et al; (2018) in " A Decentralized and sustainable Solution to the Problems of Dumping Menstrual Waste into Landfills and Related Health Hazards in India" shows the percentage of menstruations practicing different types of methods for disposing off the menstrual products . Majorly, the menstruations with 40% throw the soiled material in dustbins, 18% throw in river or roadside, 18% used to bury, 15% approach to burn and 9% go for flushing in toilets.

DIFFERENT TYPES OF MENSTRUAL PRODUCTS: -

In India sanitary napkin is not yet the first choice, not all women's do access to proper hygienic products. There are products which are newly introduced like tampons, biodegradable napkins, menstrual cups but using cloth is still in trend. Though sanitary napkin is the most widely used product in India.

- Reusable Cloth Pads: These cloth pads are used again after washing, drying and sterilizing directly in sunlight. These are ecofriendly and cost effective.
- Commercial Sanitary Pad: These are expensive as compared to reusable cloth pads and are available at chemist shop and commercial stores. These pads are non-reusable and not very ecofriendly.
- Tampons: They are the types of absorbents that provide protection internally. They are soft plug like materials used by inserting inside the vagina. They are expensive and are not eco-friendly.
- Reusable Tampons: These are washable tampons and are ecofriendly. These are made up of bamboo, wool, cotton or hemp and are inserted into the vagina in the same way as disposable tampons to collect menstrual flow before leaving the body.
- Menstrual Cups: They are cup like structure made of medical grade silicone rubber which makes the cup easy to fold and get inserted into the vagina to collect menstrual flow. They are reusable and environmental friendly
- Bamboo Fiber Pad: In these pads bamboo pulp is used as an absorbing material. These are ecofriendly and possess antibacterial properties thus provides infection and irritation free menstruation.
- Banana Fiber Pad: In India under the Trade name "Saathi", low cost sanitary pads for rural women's are made from banana fiber. They are ecofriendly and decompose within six months after use.
- Water Hyacinth Pads: These pads are manufactured by using water hyacinth. It is sold under Trade Name "Jani". They are cost effective and environment friendly in nature.

Impact of Menstrual Waste on Environment:-

According to menstrual health alliance of India (MHAI) The number of menstruating women's in India who use disposable sanitary napkins are 21 millions in number. Disposable sanitary napkins are made of 90% plastic and keeping in mind the adhesive, packing etc. each pad is equivalent to 4 plastic bags. If we estimate number of pads used per cycle it equates approximately 12 billion pads disposal per year. According to a report by MHAI (2018) each of these pads can take roughly 500 – 800 years to decompose. Blockage of sewerage system is a global problem and contributing factor is flushing menstrual products in toilets. These blocked sewage are cleaned by workers without proper protection, leading workers to exposure with harmful chemicals and pathogens. Burning of pads in open releases dioxide which are toxic and carcinogenic in nature. Deodorized sanitary products used by menstruation contain chemicals used in bleaching such as organochlorines which when buried in soil microflora and decomposition takes time. Conventional disposable menstrual products are bleached white and this process creates the chemical dioxin, which is linked to Immune System suppression, reproductive issues and cancer (G.Bhor et.al;).

CONCLUSION:-

Menstrual waste disposal is a huge problem that needs to be tackled on priority. Every month around 353 billion menstruate in India uses sanitary products and generates menstrual waste. MHAI reports have shown that one sanitary pad could take 500 – 800 years to decompose and is non-biodegradable thus leads to health and environment hazards. Every month sanitary pads are making a way to landfills, water bodies and open fields are posing a great threat to not only human's life but animals and most importantly environment. In order to manage sanitary waste the new guidelines in the solid waste management's rules 2016 issued by Union Minister of Environment. Forest and climate have made it mandatory for manufactures to provide a wrapper for proper disposal of menstrual waste the wrapper should be made of recyclable material. We need to educate, aware the people not only

menstruations about the proper disposable techniques, benefits of biodegradable and eco-friendly materials to save the earth from plastic bug.

REFERENCES:-

1. Truyens, C; Wilmouth, R.; Buckley, C.; Turnberg, W.; Daniel, W. Menstrual Management in Communal sanitation facilities: Recommendations to The kwini municipality. In proceedings of the 36th WEDC International Conference, Nakuru, Kenya, 1-5 July 2013.
2. Kaur R et al,(2018), Menstrual Hygiene, Management, and Waste Disposal; Practice and Challenges Faced by Girls/Women of Developing Countries. Hindawi Journal Environmental and Public Health, 2018, 1- 9.Doi:10.1155/2018/1730964.
3. Sharholly M et al;(2007), Municipal solid waste management in Indian Cities- A Review. Waste Management 28(2008),459-467. Doi;10.1016/wasman.2007.02.008
4. Sahoo, P.(2016,May 28).A growing concern: Disposing off used sanitary napkins . Retrieved from <https://www.hindustantimes.com/health-and-fitness/a-growing-concern-disposing-off-used-sanitary-napkins/story-jq7S96rYBN3BOck5gTUwPM.html>
5. Sripada, K. (2014,June 01).Why menstruation is a nightmare for many women in India. Retrieved from <http://www.firstpost.com/living/why-menstruation-is--nightmare-for-many-women-in-India-1550781.html>
6. Shreya,(2016,November 4).The Ecological Impact Of Feminine Hygiene Products. Retrieved from <https://rctom.hbs.org/submission/the-ecological-impact-of-feminine-hygiene-products/>
7. Syren, F.(2016,October 10).The Environmental Impact of Menstrual pads and Tampons. Retrieved from <https://green-mom.com/environmental-impact-menstrual-pads-tampons/>
8. Bhor, G. ; Ponkshe, S.(2018). A Decentralized and Sustainable Solution to the Problems of Dumping Menstrual Waste into Landfills and Related Health Hazards in India: European journal of sustainable development (2018),7,3,334- 344;Doi:10.14207/ejsd.2018.v7n3p334.
9. UNICEF, Guidance on Menstrual Health and Hygiene,(March 2019)p.15.
10. World Health Organization, "Programming for adolescent health and development, WHO Technical Report Series No.886, vol.2,,World Health Organisation,1996.
11. S. B. Thakre, S. S. Thakre, M. Reddy, N . Rathi, K. Pathak and S. Ughade,"Menstrual hygiene: knowledge and practice among adolescent school girls of Saoner, Nagpur District," Journal of Clinical and Diagnostic Research, vol 5,pp1027-1033,2011.
12. A. Dasgupta and M. Sarkar, Menstrual hygiene: how hygienic is the adolescent girl? Indian Journal of Community Medicine,vol.33,no.2,pp.77-80,2008.
13. S. Garg, N.Sharma and N. Sahay, Socio-cultural Aspects of Menstruation in an Urban Slum in Delhi, Maulana Azad Medical College, New Delhi, India, 2001.
14. Water Aid, Is Menstrual hygiene and management an issue for Adolescent Girls ?"Water Aid in South Asia Publication,2009.
15. A Khanna , R. S. Goyal and R. Bhwasar,"Menstrual practices and reproductive problems: a study of adolescent girls in Rajasthan, Journal of Health Management,vol.7,no.1,pp.43-48,2009.
16. Nair, M. K.C.; Chacko D. S.; Darwin M. R.; Padma, K.; George, B.; Russel, P.S.; Menstrual Disorders and Menstrual Hygiene Practices in Higher Secondary School Girls .Indian J.Pediatr.2012,79,S74-S78.
17. Swenson and B. Havens," Menarche and Menstruation :A review of the Literature, "Journal of Community Health Nursing,vol.4,no.4,pp.199- 210,1987.
18. Scorgie. F.; Foster,J.; Staddler,J.; Phiri, T.; Hoppenjans, L.; Rees, H.; Muller, N.," Bitten by Shyness ":Menstrual Hygiene Management, Sanitation, and the quest for privacyin South Africa.Med.Anthropol.2016,35,161- 176.
19. Ali T.S.; Rizvi, S. N. Menstrual knowledge and practices of female adolescents in Urban Karachi, Pakistan.J.Adolesec.2009.05.013.
20. Eco-femme. Breaking the silence on the incineration of Menstrual Hygiene Waste . Eco-femme; Auroville, India:2015.

21. K. Drakshayani Devi and P. Venkata Ramaiah,"A study on menstrual hygiene among rural adolescent girls.; Indian Journal of Medical Sciences,vol.48,no.6,pp.139-143,1994.
22. UNICEF, Sharing Simple Facts: Useful Information about Menstrual Health and Hygiene, UNICEF India, New Delhi, India, 2008.



Dr. Sangita Tiwari

Asst. Prof. Department of Biotechnology, A.P.S. University Rewa (M.P.)